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Cover Photo: NRCS Hydrologic Technician Keegan Krantz maintains the Nicks Valley SNOLITE site. The site was measured as a snow course on April 20, 2022 with 121" of snow depth and 46.7" of SWE. Photo by Austin Hart.

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General Overview

Updated 1991-2020 Snow Survey and Water Supply Normals

Every 10 years, The NRCS's Snow Survey and Water supply Forecasting Program (SSWSF) produces new 30-year central tendency statistics. These are often call the site Normals. The new 1991-2020 Normals have been developed and are being used in this publication. A detailed discussion can be found on the National Water and Climate Center's website here. The main take away is that "100% of Normal" this winter is not likely to be the same as it was last decade. A side-by-side comparison of the new and old Alaska snow-pack Normals for May can be found here.

SnowPack

After a long, dark and, in many locations, record breaking stormy winter, April provided the break that sun starved Alaskans have been craving. For most of the month, and most of the state, the weather was clear and cold. Snow enthusiasts were happy and easily recognized by their "Alaska tans"; which is a more conservative version of a farmer's tan which only extends from the top of the neck to the bottom of the sunglasses.

The snowpack on May 1, which has been exceptional all winter, continues to be robust. Even with a strong April sun and the transition to summer under way, the timing is mostly on the later side of average. This results in the majority of the state retaining a considerably above normal snowpack. Of the 163 Alaska Stations with more than 10 years of record, 44 of these boasted period-of-record high SWE for May 1. This trend continues up into the Yukon Territory where the snowpack also continues to be one for the record books. This is more remarkable because April was mostly dry and snow loss to melting was observed throughout the state.

		Basin Index			
		Current	Last Year		
Alaska Statewide Snowpack	# of Sites	Percent of Median	Percent of Median		
Upper Yukon Basin	34	213	160		
Central Yukon Basin	10	194	115		
Tanana Basin	28	321	151		
Koyukuk Basin	9	120	100		
Kuskokwim Basin	_		_		
Lower Yukon	4	149	133		
Copper Basin	16	193	119		
Matanuska-Susitna Basin	13	177	102		
Northern Cook Inlet	7	151	121		
Kenai Peninsula	21	134	139		
Western Gulf of Alaska	8	146	140		
Southeast Alaska	11	151	179		

General Overview

Snowpack continued

The month of April started and ended with storms across the southern portion of the state. Total precipitation was below normal for the region and included rain for lower elevations, which is typical for the month. The majority of stations below 1000' Above Sea Level (ASL) are snow free. Telemetered stations in southern Alaska began melting near normal, with a range of a few days early, to nearly a week late depending on the location.

The Tanana and Copper River basins remain at or near record snowpack for May 1 despite little to no input over the month. Temperatures in the interior were cooler than normal which helped preserve a stout snowpack. The onset of melt in these basins is about one week later than normal.

In the Yukon basin the snowpack remains considerably above normal despite below average monthly precipitation. The upper Yukon, as measured by Canadian snow surveyors, is at historic maximum for most of the reporting stations. Going downstream the snowpack isn't breaking records but is well above normal. Near the town of Eagle, the American Creek SNOTEL was installed on higher ground to replace Mission Creek SNOTEL when it was destroyed by ice dam flooding in 2009. The snowpack on the Yukon is considerably more robust on May 1, 2022 than it was on May 1, 2009. However, snowpack is only one of many factors in predicting breakup flooding.

Snow monitoring stations in the Arctic reaches of the state are sparse but indicate this area may have below normal snowpack. The May through July forecast for the Sagavanirktok River on the north slope is predicted at 95%, which is the only forecast point in the state that is below normal. The rest of the state is predicted to have well above normal stream flows.

Precipitation

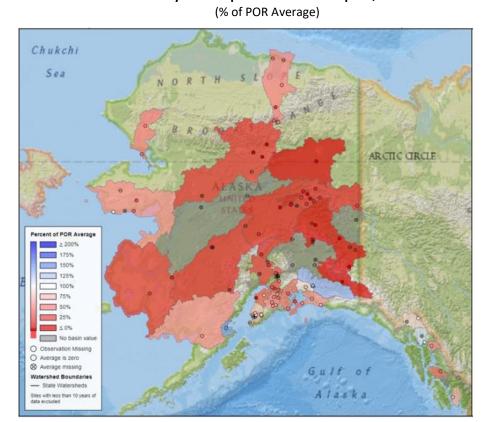
Away from the Gulf of Alaska, the April was dry, with many stations reporting zero precipitation for the month. Fifteen of the 89 stations used to monitor monthly precipitation received no measurable precipitation over the April. These stations are concentrated in the central part of the state. The north and western reaches of the state received some precipitation, although less than normal. On the southern coast the month ended stormy with warm temperatures and high rain lines. These storms favored the coast, with isolated stations recording near normal precipitation. Although these stations are outliers with the majority of the state received well below average April precipitation.

Temperature

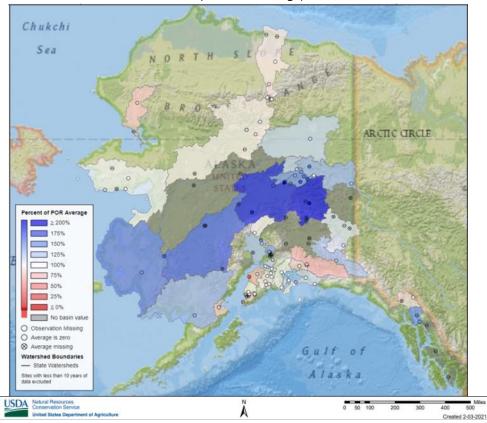
For most of the Alaska April temperature was normal to slightly below normal. The exception is in western Alaska where Bethel and Nome reported above average temps; 3°F and 5°F warmer respectively. In southcentral, Anchorage was 1°F warmer than normal, but Homer and Talkeetna were 1°F cooler. In the Copper River Basin Gulkana was 4°F cooler than normal, which preserved a record snowpack that received almost no input over the month.

Alaska Statewide Precipitation Maps

Monthly Precipitation for April, 2022

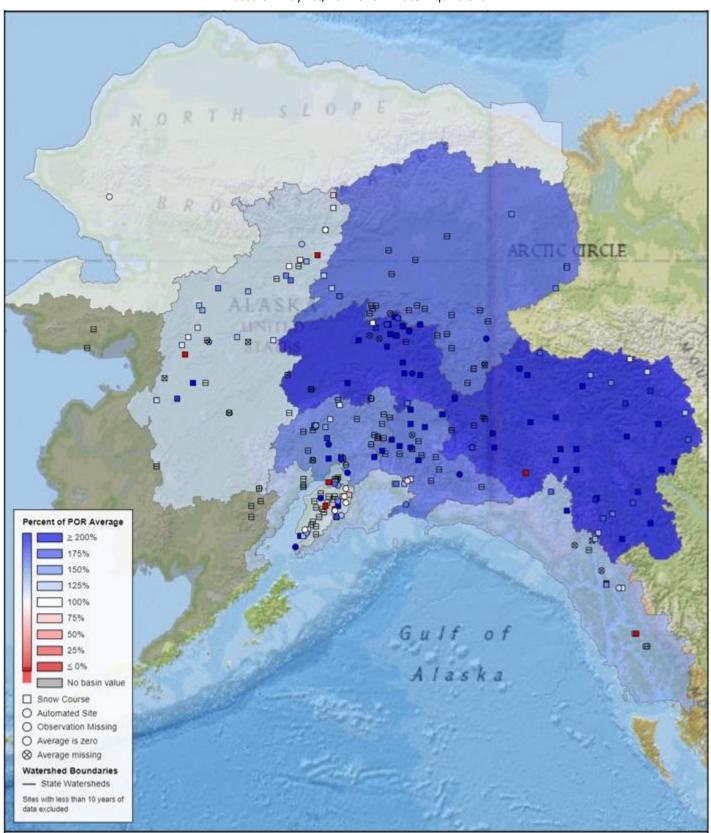


Water Year-to-date Precipitation (Oct. 1-April 30th, 2022) (% of POR Average)



Alaska Statewide Snowpack Map

Based on May 1st, 2022 Snow Water Equivalent



Streamflow Forecasts

FORECAST POINT*	Percent of	Period
	Ave. Flow	
Yukon River at Eagle	142	April - July
Porcupine River nr Int'l Boundary	128	April - July
Yukon River near Stevens Village	128	April - July
Tanana River at Fairbanks	120	April - July
Tanana River at Nenana	135	April - July
Little Chena River near Fairbanks	180	April - July
Chena River near Two Rivers	173	April - July
Salcha near Salchaket	163	April - July
Kuskokwim River at Crooked Creek	127	April - July
Sagvanirktok River near Pump Station 3	95	April - July
Kuparuk River near Deadhorse	122	April - July
Gulkana River at Sourdough	203	April - July
Little Susitna River near Palmer	143	April - July
Talkeetna River near Talkeetna	127	April - July
Ship Creek near Anchorage	116	April - July
Kenai River at Cooper Landing	115	April - July
Bradley Lake Inflow	102	April - July
Taiya River nr Skagway	195	April - July

Snowmelt Runoff Index (SRI): for streams which no longer have stream gauging

FORECAST POINT INDEX	K
I ONLEGO I ONE INDE	
Koyukuk River at Hughes —	
MF Koyukuk R near Wiseman	Index Key:
Slate Creek at Coldfoot	
Beaver Creek above Victoria Creek	much below aver-
Birch Creek below South Fork	-2 to -3 age snowmelt run-
Caribou Creek at Chatanika	off
Susitna River near Gold Creek	OII
Chulitna River near Talkeetna	
Deshka River at mouth near Willow	below average
Montana Creek at Parks Highway 1.5	-1 to -2 snowmelt runoff
Willow Creek near Willow	
Skwentna River at Skwentna —	
Chuitna River near Tyonek —	average snowmelt
Campbell Creek near Spenard	-1 to +1 runoff
Indian Creek at Indian1.0	
Bird Creek at Bird Creek1.0	above average
Glacier Creek nr Girdwood1.0	+1 to +2 snowmelt runoff
Six Mile Creek near Hope	3.10 Willele Fallon
Resurrection Creek near Hope —	
Grouse Ck at Grouse Lake Outlet nr Seward	much above aver-
Anchor River near Anchor Point	+2 to +3 age snowmelt run-
Deep Creek near Ninilchik1.0	off
Ninilchik River near Ninilchik1.0	
Fritz Creek near Homer	
Skagway River at Skagway	
Municipal Watershed C nr Petersburg	
Gold Creek near Juneau	

HOW FORECASTS ARE MADE

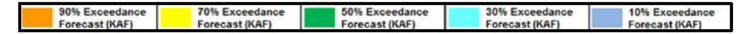
Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

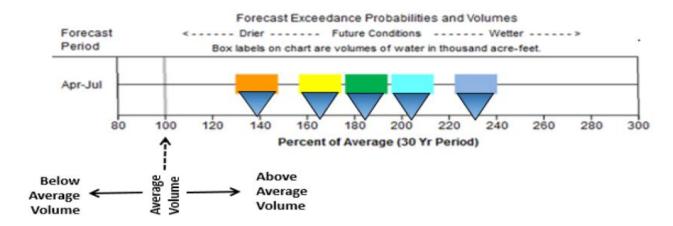
How to Interpret the Streamflow Forecast Graphic:

This graphic provides a visual alternative to the forecast tables the NRCS has presented for years. It gives both the volume and percent of average of each of the five forecast exceedances.

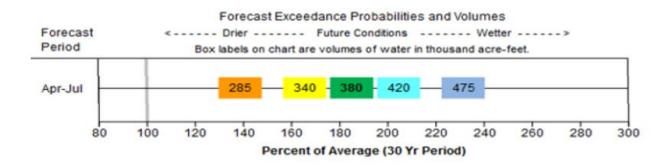


The five colored boxes represent each forecast's five exceedances.

The center of each forecast exceedance box corresponds to that exceedance's percent of average on the horizontal axis. In this case the green 50% exceedance forecast box is centered over 185% of average streamflow. If drier future conditions occur the orange box (90% exceedance) is 139% of average. If wetter future conditions occur the darker blue box (10% exceedance) is 232% of average. In some cases when exceedance volumes are similar, the width of the colored boxes gets squeezed. Still use the center of the box to determine its percent of average. The width of the box is irrelevant. Boxes to the right of the gray 100% of average line represent above average volumes. Conversely,



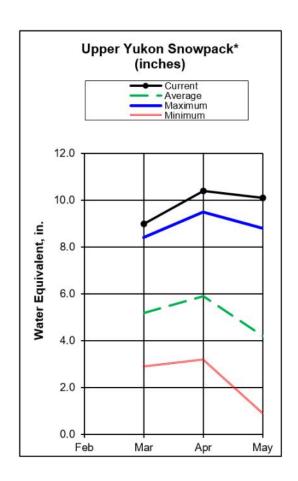
any boxes to the left of the gray 100% line represent below average volumes. In this case all forecast exceedances are for above average April-July volumes. Averages are based on the 1981-2010 period. The number inside or above each colored box represents the volume of that exceedance forecast in thousand acre-feet (KAF). In this case the green 50% exceedance forecast volume is 380 KAF which is centered above 185% of average. Volumes decrease with drier future conditions (left of green

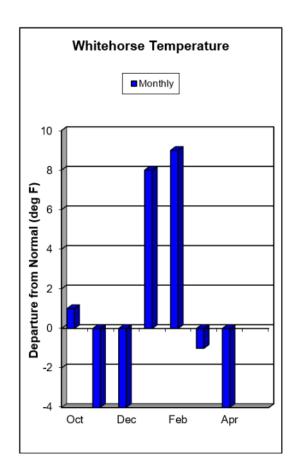


box) and increase with wetter conditions (right of green box).

Forecast graphics for other basins are available at: https://www.wcc.nrcs.usda.gov/wsf/Fcst_Chart/ This is an new product. Please submit likes, dislikes and questions to Daniel.Fisher2@usda.gov

Upper Yukon Basin





Snowpack

The snowpack in the upper Yukon is well above normal. The basin's sites are indexing at 201% of normal SWE on May 1, 2022. While several snow courses had decreased in SWE due to seasonal melt, several sites experienced increases in SWE over the month. Of the 38 SWE measurements this month, 18 were at all time maximums.

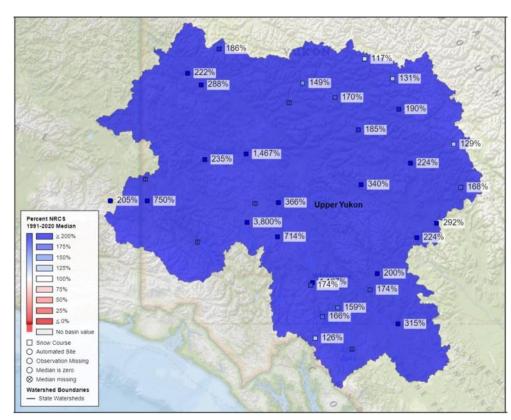
Upper Yukon Basin

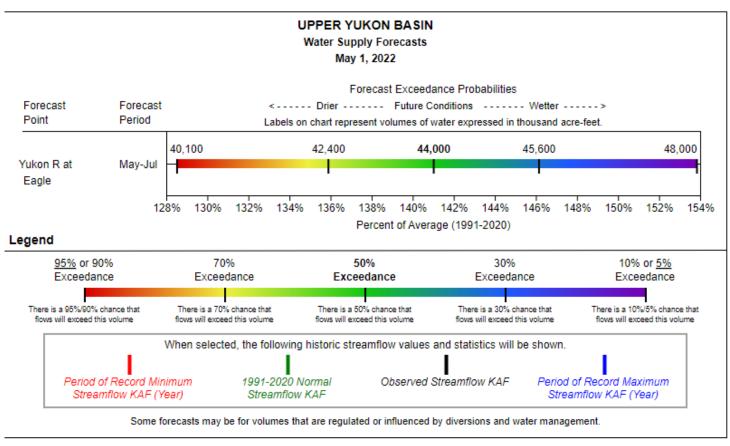
Snowpack Data

			Snow Depth (ir	1)	Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Atlin Lake	2395	16	20	0	4.5	6.0	0.0
Beaver Creek	2150	18	0	0	5.6	0.0	0.0
Blackstone River	1020	28	19		7.1	3.7	
Burns Lake	3650	48	36	28	14.8	11.1	8.8
Burwash Airstrip	2660	0	0	0	0.0	0.0	0.0
Calumet	4300	43	35	31	11.0	7.9	7.4
Casino Creek	3495	41	24	22	11.3	6.0	4.8
Chair Mountain	3500	24	0	4	7.5	0.0	1.0
Edwards Lake	2720	35	33	21	9.5	8.7	5.6
Finlayson Airstrip	3240	28	20	10	7.6	6.5	2.6
Francis River	730	36	25		10.8	5.8	
Fuller Lake	3695	41	37	28	10.8	9.7	8.4
Grizzly Creek	3200	28	22	15	7.8	5.1	4.2
Hoole River	3400	34	32	16	8.5	9.4	3.8
Hyland	855	39	31		12.1	9.7	
Jordan Lake	3050	29	26	15	7.6	7.2	3.8
King Solomon Dome	3540	46	20	18	15.0	6.8	5.2
Log Cabin B.C.	2900	51	72	41	18.9	30.0	15.0
Macintosh	3805	27	12	1	7.6	3.5	0.2
Mayo Airport	1770	12	8	0	3.9	2.1	0.0
Meadow Creek	4050	58	50	39	19.7	13.6	11.3
Midnight Dome	2805	45	28	21	12.9	7.9	5.8
Montana Mtn.	3350	23	29	17	7.8	8.6	4.7
Morley Lake	2700	28	23	12	10.4	8.8	3.3
Mt. Berdoe	3395	36	22	12	10.4	5.4	2.9
Mt. Mcintyre B	3600	36	33	21	10.6	8.9	6.1
Mt. Nansen	3350	24	0	0	7.0	0.9	0.1
Ogilvie River	550 550	2 4 29	20		7.0 7.2	3.9	
Pelly Farm	1550	14	9	1	4.4	2.5	0.3
Pine Lake Airstrip	995	46	37		4.4 16.2	2.3 11.8	U.S
' '	2725	37	33	18	11.2	9.8	5.9
Plata Airstrip		37 37	33 32	30	8.8		5.9 7.5
Rackla Lake Rose Creek Faro	3410			30 10		7.9	
	1080	30 50	19 30		8.5 15.0	5.3	2.5
Russell Lake	3480	50 20	39	31	15.9 5.0	11.4	8.6
Satasha Lake	3630	20	4.4	3	5.0	46.6	0.7
Summit	985	43	44	22	12.2	16.6	6.0
Tagish	3540	28	27	17 10	7.8	7.0	4.9
Twin Creeks	2950	41	28	19	13.0	8.1	5.8
Watson Lake Airport	685	37	15 45		10.8	3.8	
Whitehorse Airport	2300	22	15	2	7.0	5.8	0.6
Williams Creek	3000	30	17	5	8.0	3.7	1.2
Withers Lake	3200	39	33	31	11.0	9.7	8.4
*Estimate							

Upper Yukon Basin

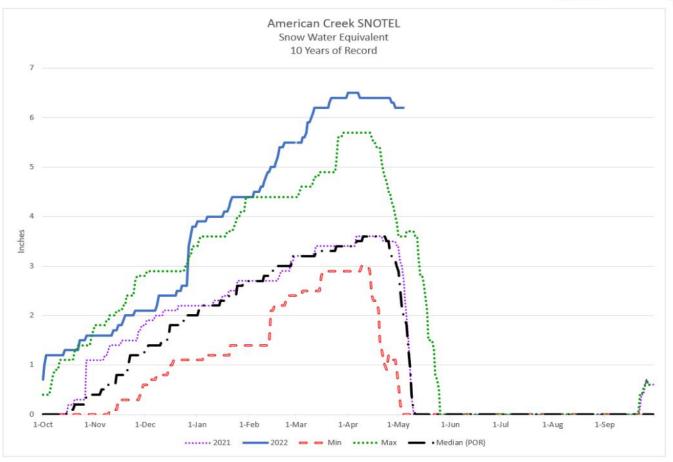
Upper Yukon Snowpack





Central Yukon Basin





Snowpack

The May 1 snowpack in the Central Yukon basin is still above normal, despite two consecutive months of well below normal precipitation. This snowpack continues to be anchored by massive gains from earlier in the winter, and all reporting stations show above normal snowpack. Snow stations in this basin recorded melt during the month. However, cool temperatures helped prolong the snowpack and melt at the SNOTEL stations in the basin started about a week later than normal.

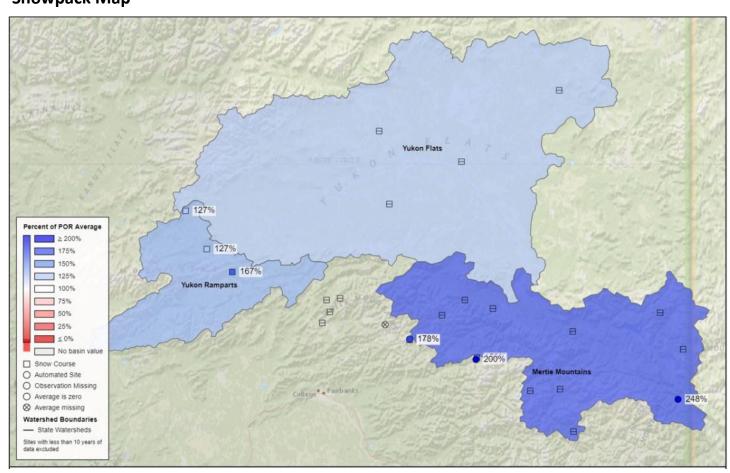
Central Yukon Basin

Snowpack Data

		Snow Depth (in)			Water Content (in)		(in)
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
American Creek	1050	22	10		6.2	3.1	
Atigun Pass	4800	38	44				
Eagle Plains	2330	30	15	22	8.9	3.7	5.8
Eagle River	1115	26	18	18	6.1	3.7	4.2
Eagle Summit	3650	17	11				
Fort Yukon	430	8	0				
Jack Wade Jct	3585	35	18		8.3	3.9	
Old Crow	980	22	15	19	5.9	3.3	4.0
Riffs Ridge	2130	28	17	18	7.6	3.6	5.2
Upper Nome Creek	2520	21			6.0		

Snowpack Map

*Estimate

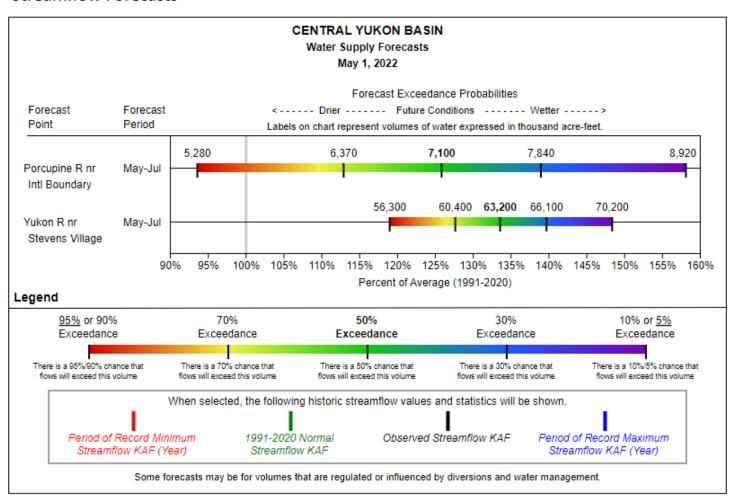


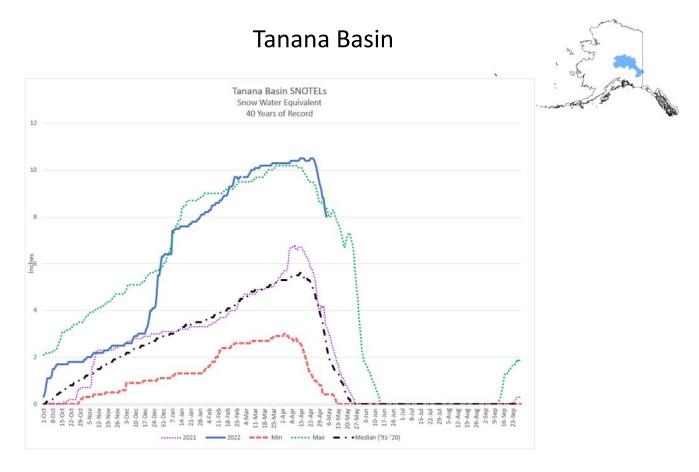
Central Yukon Basin

Precipitation

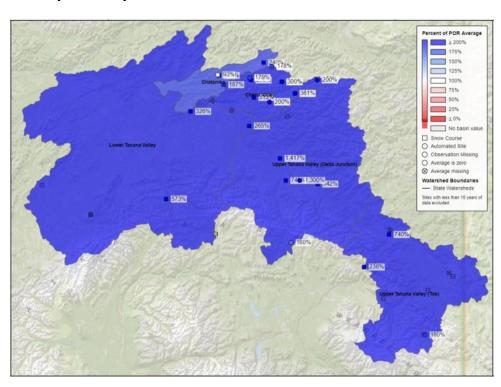
Inches Accumulated since October 1st

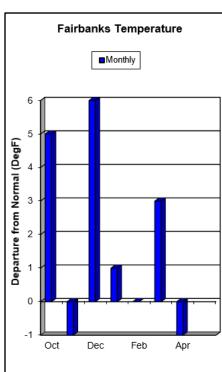
Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
American Creek	1050	5.5	3.5		
Atigun Pass	4800	6.2	4.8	6.6	94%
Chandalar Shelf	3300	5.2	3.7		
Eagle Summit	3650	9.7	5.0	5.8	167%
Fort Yukon	430	4.4	3.0	3.8	116%
Jack Wade Jct	3585	6.8	5.0		
Upper Nome Creek	2520	10.0		7.0	143%





Snowpack Map





Tanana Basin

Snowpack

Despite almost no precipitation in April, the May 1 snowpack in the Tanana basin remains one for the books. Measurement sites between Tok and Fairbanks are all reporting period of record high SWE for May 1. The 8.5" of SWE measured at Shaw Creek Flats is substantial, given that the normal value is 0.0" for May 1. It is also the highest measurement in 63 years of observation. The SNOTELs in the hills that feed the Chena River started their melt out about a week later than average, but May 1 SWE measurements are still near record. Monument Creek SNOTEL snowpack peaked 26% higher than its previous record, or at 213% of median peak snowpack.

Snowpack Data

		;	Snow Depth (ir	1)	Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Bonanza Creek	1150	30	19	0	8.8	5.0	0.0
Caribou Creek	1250	4	4	0	1.3	0.5	0.0
Caribou Snow Pillow	900	15	8	0	5.2	2.0	0.0
Chena Lakes	500	1	0		0.9	0.0	
Chisana	3320	14	8		4.5	2.6	2.2
Cleary Summit	2230	38	26	20	11.6	7.7	5.2
Colorado Creek	700	23	16	4	7.2	4.6	1.0
Creamers Field	440	6			2.3		
Faith Creek	1750	23	16	10	7.2	4.2	3.1
Fielding Lake SNOTEL	3000	42	24		13.9	7.2	
Fielding Lake	3000	51	37	32	17.9	9.6	9.8
Fort Greely	1500	27	5	0	7.4	1.2	0.0
French Creek	1800	39	22	14	12.2	7.0	3.6
Gerstle River	1200	22	0	0	6.5	0.0	0.0
Granite Crk	1240	21	0		9.1	0.0	0.0
Kantishna	1550	22	23		7.8	8.4	
Little Chena Bottom	1100	18	14	9	6.4	4.0	2.2
Little Chena Ridge	2000	21	6	8	7.8	1.7	2.4
Little Chena Ridge SNOTEL	2000	14	2		5.0	0.6	1.6
Look Eyrie SNOLITE†	5040	97	99	_	33.5	_	_
Mentasta Pass	2430	31	21	12	10.6	7.0	3.2
Monument Creek	1850	25	12	8	9.3	3.3	1.9
Monument Creek SNOTEL	1850	23	13		8.7	3.8	2.4
Mt. Ryan	2800	24	22		8.7	6.6	4.8
Mt. Ryan SNOTEL	2800	29	26	17	9.1	7.9	4.6
Munson Ridge	3100	55	37	30	18.2	9.9	7.8
Munson Ridge SNOTEL	3100	52	37		17.4	11.1	8.7
Nenana	415	4	0				
Paradise Hill	2010	15			6.2		
Rock Creek Bottom	2250	32		0	12.6		0.0
Shaw Creek Flats	980	27	0	0	8.5	0.0	0.0
Teuchet Creek	1640	23	2	5	6.5	0.4	1.2
Teuchet Creek SNOTEL	1640	17	1		6.5	0.2	0.7
Tok Junction	1650	27	7	0	7.4	1.6	0.0
Upper Chena	3000	39	25	22	11.6	7.2	6.6
Upper Chena SNOTEL	2850	36	29		11.2	8.6	5.4

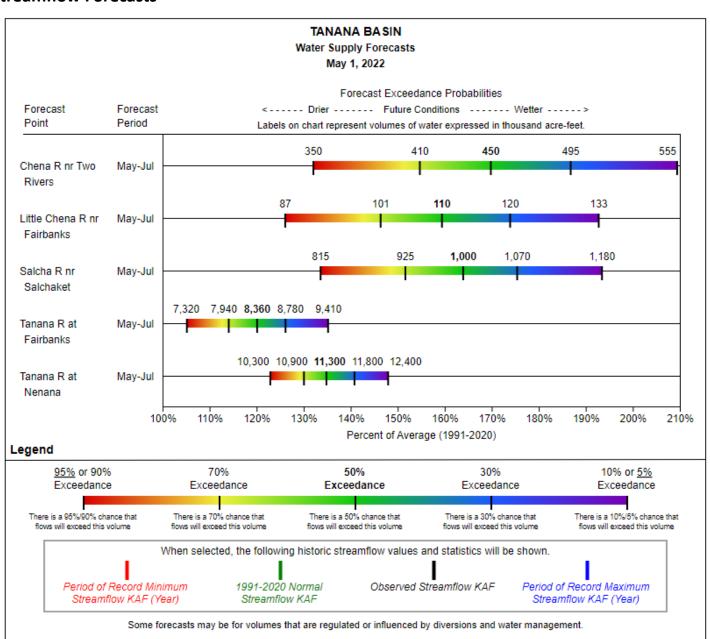
[†] measured 4/13/2022

Tanana Basin

Precipitation

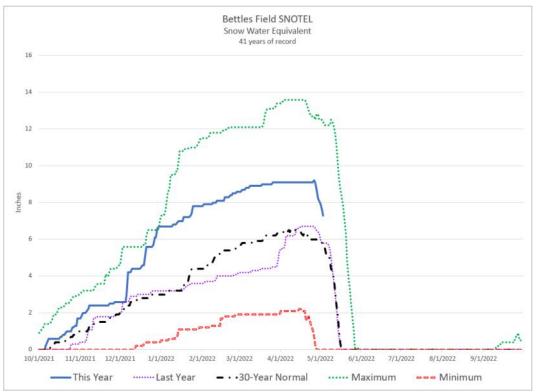
1 1	A	! _ :	O-4-1	4 - 1
inches	Accumulate	ea since	October	'ISI

Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Chena Lakes	500	11.6	6.8		
Chisana	3320	4.5	4.7	3.8	118%
Creamers Field	440	8.8			
Fielding Lake	3000	15.5	8.5		
Granite Crk	1240	9.0	4.6	4.2	214%
Kantishna	1550	12.7	8.6	5.8	219%
Monument Creek	1850	10.4	6.8	6.4	163%
Mt. Ryan	2800	9.6	8.0	6.2	155%
Munson Ridge	3100	15.6	10.2	8.8	177%
Nenana	415	9.0	5.8	3.9	231%
Paradise Hill	2010	8.2			
Teuchet Creek	1640	9.0	5.1	5.2	173%
Upper Chena	2850	8.3	8.9	7.8	106%

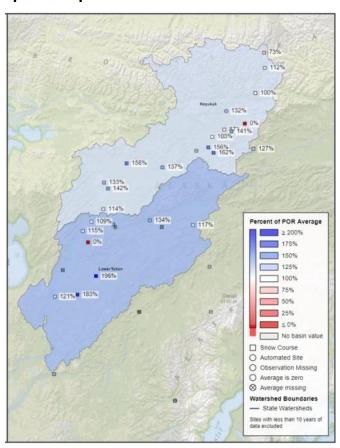


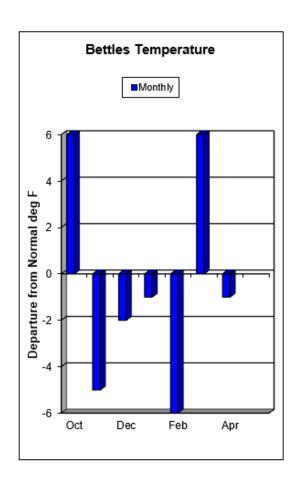
Western Interior Basins





Snowpack Map





Western Interior Basins

Snowpack

Koyukuk

Snowpack in the Koyukuk is slightly above normal. The basin index is reporting 108% median on May 1. The Table Mountain and Bonanza Forks snow courses, on the Dalton Highway, are reporting below normal snowpack. The remainder of reporting stations in the basin are at or above historical median. Bettles Field and Coldfoot SNOTEL stations, started melting on April 26, which is 6 days later than normal.

Kuskokwim

Snow in the Kuskokwim is above normal where it persists. The 9.4" of SWE reported by the McGrath SNOTEL is considerably higher than normal for May 1. The only other data point in this this basin, Telaquana Lake, melted out on April 22nd; which is about one week later than its period of record median. Aniak SNOTEL melted out on April 16th.

Lower Yukon

The May 1 snowpack in the Lower Yukon is above normal. The aerial markers down river of Galena are all reporting above normal snowpack for the date. The 6.1" of SWE being reported at Galena AK SNOTEL on May 1st is the period-of-record high value in its 4-year record, though this was due to delayed melt-out, it reported a peak snowpack similar to 2020.

Snowpack Data

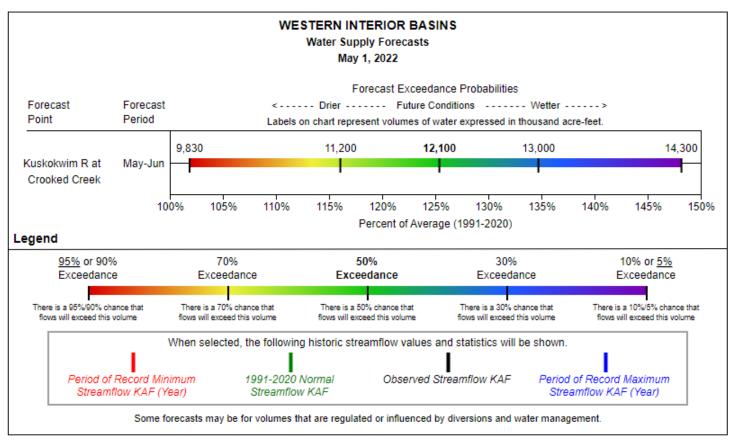
		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Koyukuk							_
Bettles Field	640	20	22		7.9	6.0	5.9
Bonanza Forks	1200	0		14	0.0		3.9
Cloverleaf	170	15	9	12	5.1*	2.4*	3.8
Coldfoot	1040	18	17		5.6*	4.2*	5.5
Colville Bend	170	18	17		6.1*	4.6*	
Disaster Creek	1550	9		12	2.9		3.0
Gobblers Knob	2030	0	2				
Huggins Creek	290	21	17		6.7*	4.7*	
Jr Slough	160	15	18	14	4.9*	4.9*	4.4
Kaldoyeit	750	21	27	12	5.5*	6.9*	3.4
Kanuti Chalatna	670	13	12	16	3.5*	3.1*	3.6
Kanuti Kilolitna	550	14	0	9	3.9*	0.0*	2.8
Minnkokut	580	20	26	24	5.2*	7.1*	6.4
Nolitna	560	23	21	14	6.4*	5.5*	4.2
Table Mountain	2200	11		18	3.2		4.6
Treat Island	190	15	9		5.2*	2.5*	
Kuskokwim							
Aniak	80	0	7				
McGrath	340	18			9.4	8	
Telaquana Lake	1275	0	0		0.0	0.0	
Lower Yukon							
Bullfrog	100	21	15		7.4*	4.4*	
Deer Creek	195	18	17		6.3*	4.7*	
Galena AK	410	18	13		6.1	4.3	
Hozatka Lake	206	9	10				
Little Mud River	855	6	6		2.1*	1.6*	
Lower Nowitna River	205	12	12		4.2*	3.3*	
Middle Innoko	150	24	18	15	8.6*	5.0*	6.0
Ninemile Island	140	19			6.2*		
Pike Trap Lake	130	0	6		0.0*	1.6*	
Squirrel Creek	150	18	27	17	5.8*	7.8*	5.6
Wapoo Hills	220	27	30	6	9.2*	9.1*	1.8
Yankee Slough	100	21	21	22	7.5*	5.9*	7.5
*Estimate							

Western Interior Basins

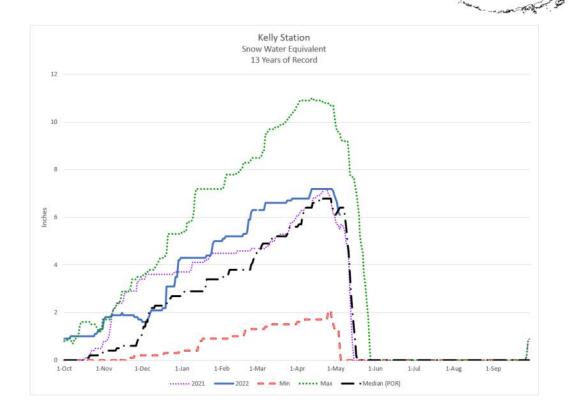
Precipitation

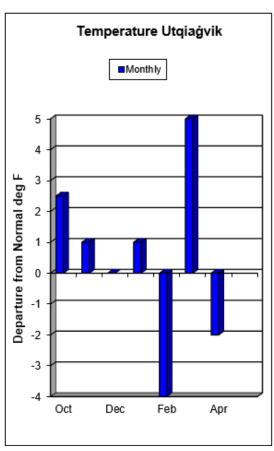
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Koyukuk					
Bettles Field	640	8.5	6.4	7.5	113%
Coldfoot	1040	6.1	5.8	6.2	98%
Gobblers Knob	2030	6.2	5.3	6.4	97%
Kuskokwim					
Aniak	80	16.6	13.3	5.9	281%
McGrath	340	12.5	9.9		
Telaquana Lake	1275	12.4	11.3		
Lower Yukon					
Galena AK	410	7.8	6.2		
Hozatka Lake	206	7.0	6.4		



Arctic and Kotzebue Sound





Snowpack

<u>Arctic</u>

The stations along the Dalton highway are reporting the fourth month in a row of below normal winter precipitation. April precipitation was 38% of average for the 6 stations used to index this region. Snow depth measurement points along the Dalton Highway are mixed, with Prudhoe Bay moderately above, and the others below, period of record median.

Kotzebue

The 6.6" of SWE the Kelly Station SNOTEL is reporting on May 1 is near the period of record normal value of 6.3". Melt at the station began on April 27, one day later than normal.

Arctic and Kotzebue Sound

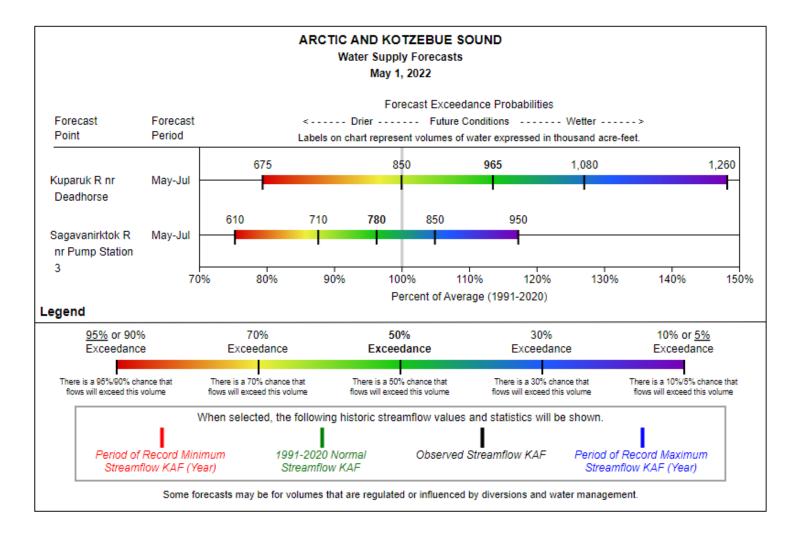
Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Atigun Pass	4800	38	44				
Imnaviat Creek	3050	17	23				
Kelly Station	310	21	20		6.6	5.7	6.3
Prudhoe Bay	30	20	9				
Sagwon	1000	13	23				
*Estimate							

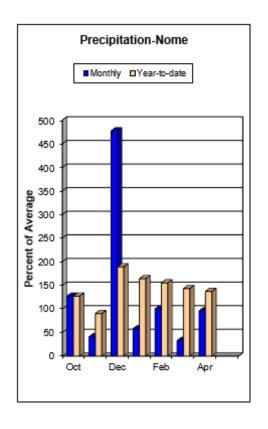
Precipitation

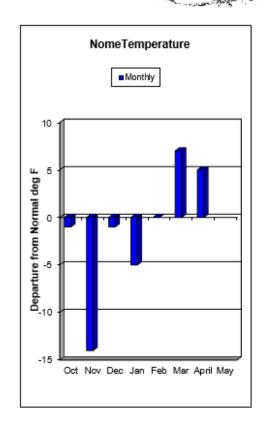
Site Name			Inches Accumulated since October 1st						
	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal				
Arctic									
Atigun Pass	4800	6.2	4.8	6.6	94%				
Atigun Camp	3400	2.8	2.6	_	_				
Imnaviat Creek	3050	3.0	2.4	3.3	91%				
Prudhoe Bay	30	4.5	3.3	3.7	122%				
Sagwon	1000	3.4	2.9	3.2	106%				
Kotzebue Sound									
Kelly Station	310	5.6	7.0	7.9	71%				

Arctic and Kotzebue Sound



Norton Sound/Y-K Delta/Bristol Bay





Snowpack

The Seward Peninsula received below average precipitation for April. The 3 stations used to index the basin are reporting 54% normal monthly precipitation. Reported snow depths are well below period of record median.

Precipitation

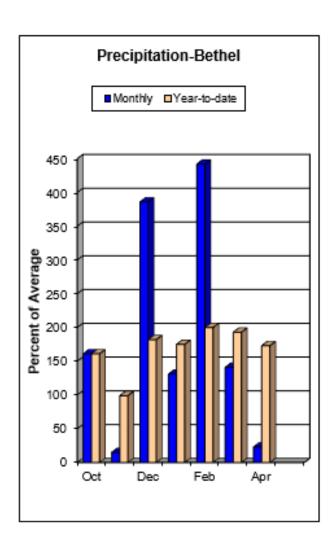
Inches Accumulated since October 1st

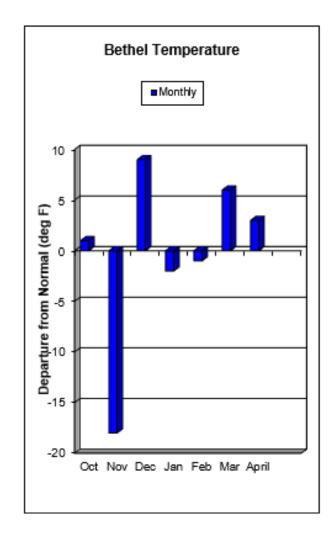
Site Name	Elev.	This Year	Last Year	1991-2020 Nor- mal	% of Normal
Norton Sound					
Pargon Creek	100	6.6	7.6	6.4	103%
Rocky Point	250	5.4	4.8	6.1	89%

Norton Sound/Bristol Bay

Snowpack Data

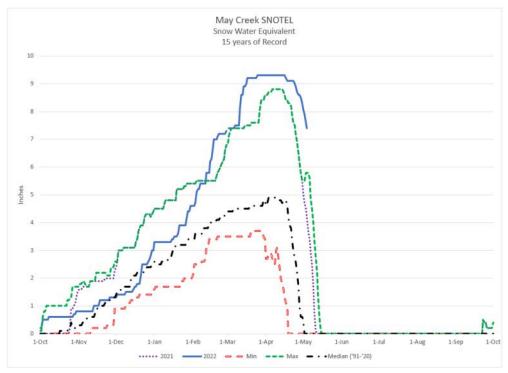
Snow Dept		now Depth	oth (in) Wa		ater Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Pargon Creek	100	0	11				
Rocky Point	250	11	29				

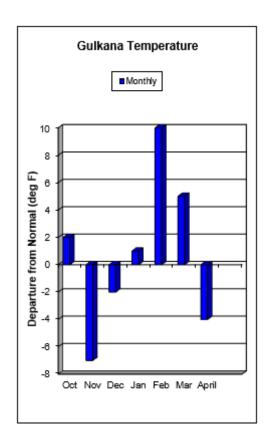




Copper Basin







Snowpack

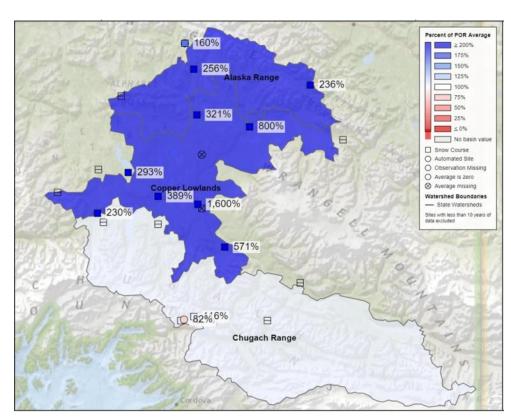
Snowpack in the Copper River Basin is considerably above normal for almost the entirety of the basin. Precipitation patterns over the month of April were mixed, with the upper reaching, interior, portions of the basin receiving almost no precipitation and storms preferring coastal locations. The beginning of April started with a series of storms that came in through Valdez and gave snow to the Thompson Pass region. This is in line with climatology but has not been the pattern through the winter. Worthington glacier has been an outlier of below normal snowpack in the basin all season. April storms brought the May 1 measurement of 24.8" SWE to 106% normal, the first above normal reading for this snow course all year. The interior snow measurements in this basin remain near record despite receiving very little precipitation in April. The 15.4" SWE measured at Haggard Creek is the highest May 1st reading in 57 years of record, and only 0.3" lower than the April 1 measurement. This indicates some melting, however colder than normal temps observed at Gulkana indicate that the onset of melt is delayed in the interior reaches of the basin. Both May Creek and Upper Tsaina SNOTELs started melt out near normal dates.

Copper Basin

Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Chistochina	1950	30	8	0	10.4	2.0	0.0
Copper Center	1264	19			7.3		
Fielding Lake	3000	51	37	32	17.9	9.6	9.8
Fielding Lake SNOTEL	3000	42	24		13.9	7.2	
Gulkana River	1830	21	0		8.5	0.0	
Haggard Creek	2540	43	17	12	15.4	4.6	3.8
Kenny Lake School	1300	12	0	0	4.0	0.0	0.0
Little Nelchina	2650	24	4	12	7.6	1.7	3.2
May Creek	1610	21	12		7.9	4.7	0.0
Mentasta Pass	2430	31	21	12	10.6	7.0	3.2
Nicks Valley SNOLITE†	4280	121	114	_	46.7	_	
Paxson	2650	48	28	21	16.4	7.2	6.1
Tazlina	1250	12	0	0	4.8	0.0	0.0
Tolsona Creek	2000	21	4	5	7.0	1.1	1.5
Tsaina River	1650	43	35	36	16.0	14.1	12.5
Upper Tsaina River	1750	44	54		15.3	22.2	18.6
Worthington Glacier	2100	64	63	62	24.8	25.5	23.5
† Measured 4/20/2022							

Snowpack Map

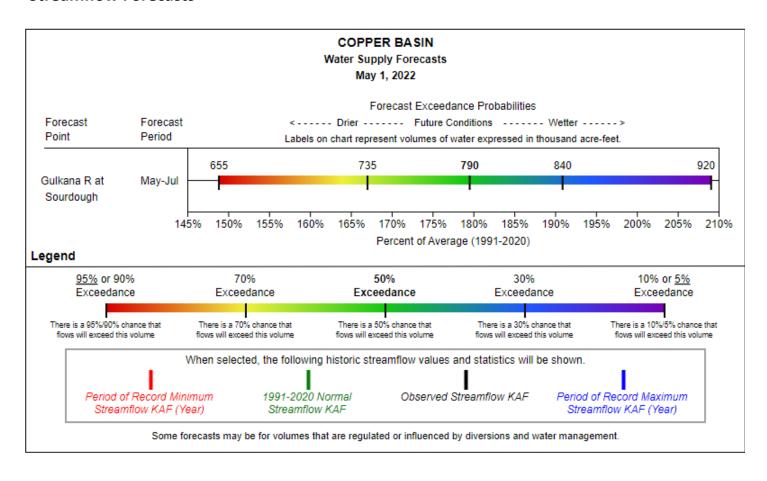


Copper Basin

Precipitation

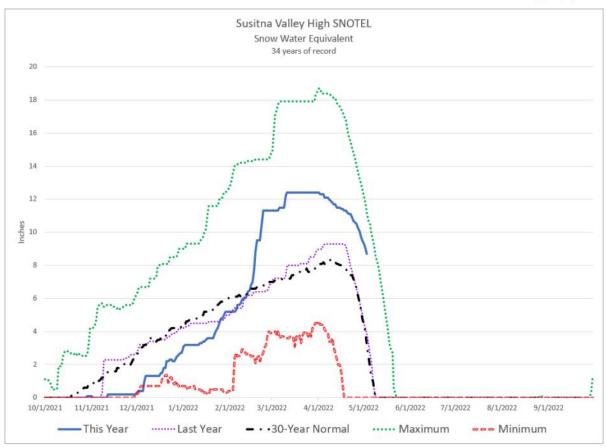
Inches Accumulated since October 1st

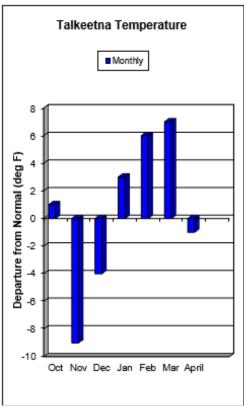
Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Fielding Lake	3000	15.5	8.5		
Gulkana River	1830	9.9	7.7		
May Creek	1610	8.8	8.8	6.2	142%
Upper Tsaina River	1750	19.3	24.4	26.7	72%



Matanuska—Susitna Basin







Snowpack

The May 1 snowpack in the Matanuska and Susitna basins, like the proceeding months, is well above normal. This is despite well below normal April precipitation. The Lake Louise snow course, in the upper reaches of the Susitna, was measured at 8.5" SWE, which is its highest May reading in 57 years of observation. It is also only 8% less than the April 1 reading, which compared to the normal decrease of 45% indicates melt has begun but is likely delayed. Downstream, in the lower basin the snowpack is less record-breaking, however all reporting stations recorded well above normal SWE on May 1. The Susitna Valley High SNOTEL peaked on April 1, which is 10 days earlier normal, though Alexander Lake SNOTEL is headed for its latest melt-out in its 8-year record.

Matanuska—Susitna Basin

Snowpack Data		Snow Depth (i		Water Content (in)			
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Alexander Lake	160	39	37		11.5	10.3	
Birthday Pass	4020	120	84		42.0	27.0	
Blueberry Hill	1200	60	62	46	19.6	14.7	13.1
Chelatna Lake	1450	47	50	38	14.2	13.0	9.9
Curtis Lake	2850	38	30	22	8.5	5.2	4.1
Denali View	700	50	44	38	15.1	10.7	10.2
Dunkle Hills	2700	48	38	33	14.7	9.5	8.8
Dutch Hills	3100	90	68	75	31.5	17.8	24.5
E. Fork Chulitna	1770	55	58	45	16.5	11.4	12.3
East Palmer	230	17	13			1.7	
Fishhook Basin	3300	90	66	56	31.0	20.0	17.8
Fog Lakes	2120	43	30	24	12.3	5.7	5.0
Frostbite Bottom	2700	72	61		24.3	16.1	
Horsepasture Pass	4300	36	29	30	9.1	6.1	6.9
Independence Mine	3550	98	70	65	34.9	20.4	20.4
Independence Mine SNOTEL	3550	90	62		32.8	16.6	
Lake Louise	2400	37	30	24	9.2	5.3	4.7
Little Susitna	1700	59	60	37	18.8	14.0	10.0
Nugget Bench	2010	63	48	46	19.5	12.0	13.8
Ramsdyke Creek	2220	81	59	62	27.1	15.6	19.2
Sheep Mountain	2900	32	30	25	7.8	5.9	5.2
Spring Creek	580	14	16				
Square Lake	2950	39	29	21	7.9	4.9	4.2
Susitna Valley High	375	40	40		12.4	9.0	7.9
Talkeetna	350	38	34	26	11.8	7.3	6.4
Tokositna Valley	850	60	60		18.9	15.1	13.8
Tyone River	2400	41	18	21	10.7*	3.6*	4.4
Upper Oshetna River	3150	40	27	22	10.1*	4.9*	4.6
Upper Sanona Creek	3100	39	28	28	9.7*	4.7*	5.6
Willow Airstrip	200	40	44	28	12.9	10.9	6.8
*Estimate							

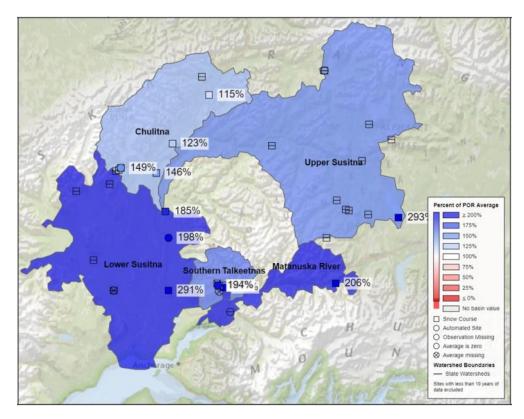
Precipitation

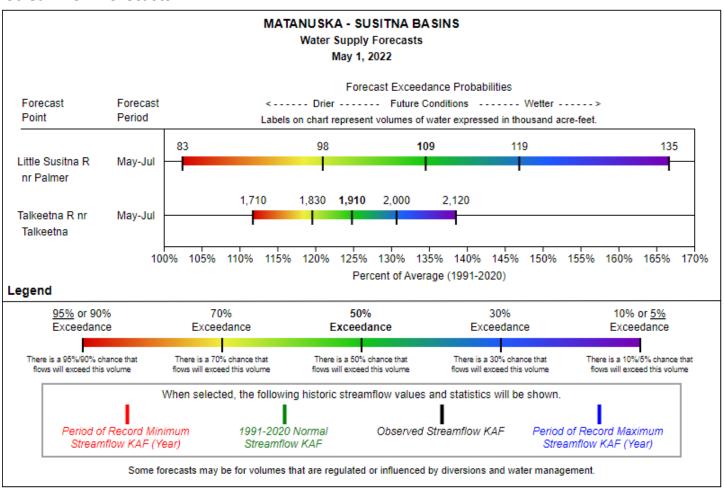
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Alexander Lake	160	18.2	14.2		
Frostbite Bottom	2700	23.1	18.7		
Independence Mine	3550	27.9	18.1	19.4	144%
Monahan Flat	2710	12.4	8.3	7.8	1.6
Spring Creek	580	11.3	8.0		
Susitna Valley High	375	17.2	11.5	12.8	134%
Tokositna Valley	850	21.9	16.8	22.5	97%

Matanuska—Susitna Basin

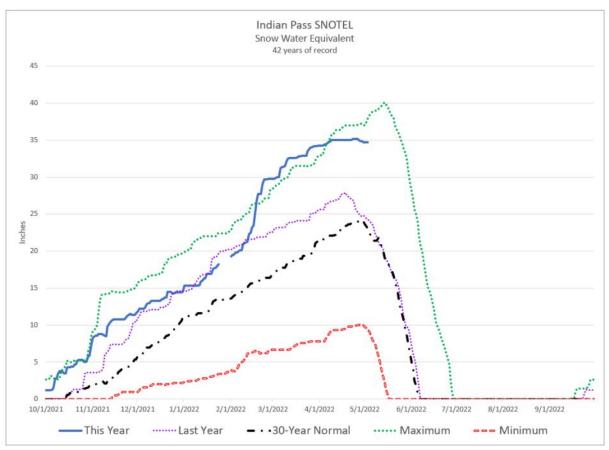
Snowpack Map

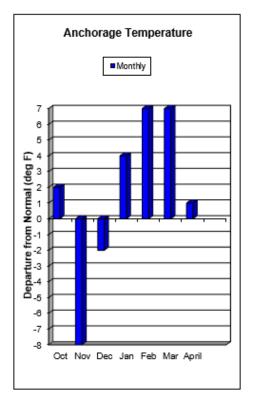




Northern Cook Inlet







Snowpack

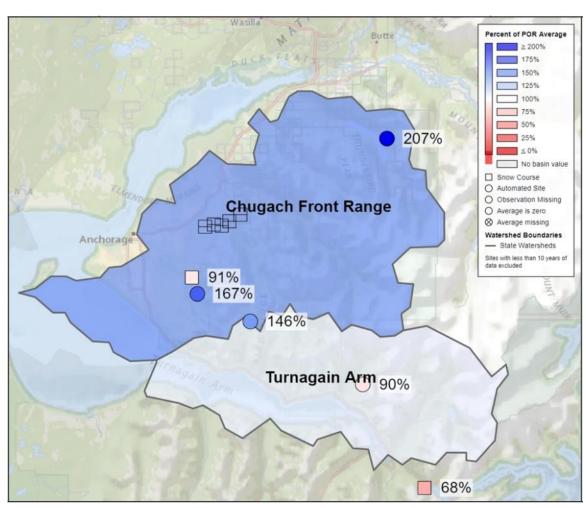
The May 1 snowpack for the Northern Cook Inlet region is above average in all locations with a snowpack. There was no snow at the Kincaid snow course, but at 250' ASL this is normal for the date. Every other measurement in the region is above average despite April precipitation being 34% of average. Moraine SNOTEL peaked at 11.3" SWE on April 15, which is 3 days later than normal. This value is 145% of the normal peak and will push melt out later than normal. Anchorage Hillside SNOTEL started its melt-out 10 days later than median and reached a peak SWE of 13.4" which is 132% of median peak SWE.

Northern Cook Inlet

Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Anchorage Hillside	2080	33	24		12.0	8.7	5.9
East Palmer	230	0	0		0.0	0.0	
Indian Pass	2350	78	55		34.7	24.7	23.6
Kincaid Park	250	0	0	0	0.0	0.0	0.0
Moraine	2100	22	11		9.3	4.4	3.4
Mt. Alyeska	1540	75	73		30.4	31.0	30.4
Portage Valley	50	10	22	14	5.4	8.2	6.8
South Campbell Creek	1200	8	12	1	3.2	4.1	0.4
Spring Creek	580	0					
*Estimate							

Snowpack Map

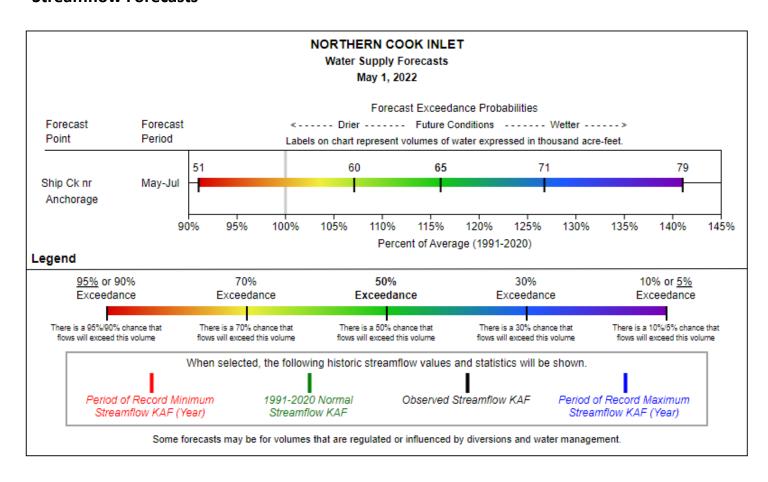


Northern Cook Inlet

Precipitation

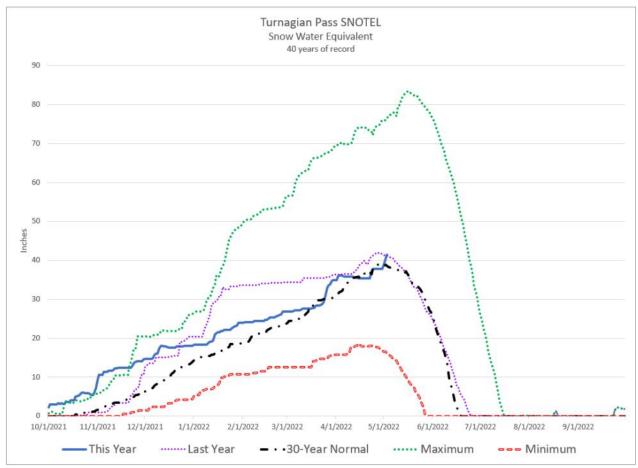
Inches Accumulated since October 1st

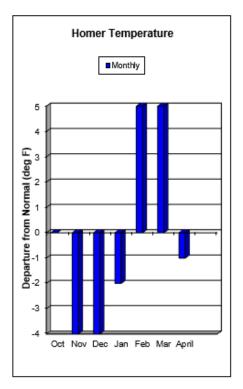
Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Anchorage Hillside	2080	17.3	15.3	16.1	107%
Indian Pass	2350	33.0	30.6	28.2	117%
Moraine	2100	14.6	11.1	11.2	130%
Mt. Alyeska	1540	54.8	42.3	47.7	115%
Spring Creek	580	11.3	8.0		



Kenai Peninsula







Snowpack

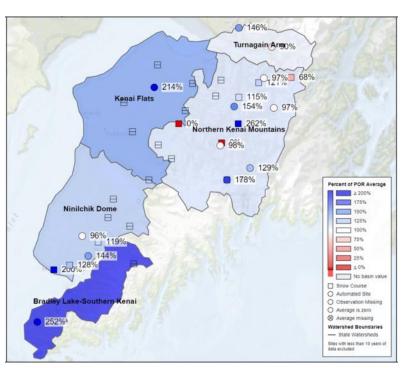
The May 1 snowpack on the Kenai Peninsula is generally above normal. The low elevation snow courses Snug Harbor (500' ASL), Jean Lake (620' ASL) and Moose Pass (700' ASL) were all snow free on May 1, which is typical for these locations. Most of the other snow measurements are above normal. April precipitation was below average but concentrated in a series of warm and very wet storms that occurred over the end of April, and into the first of May. This initiated an avalanche cycle that the local avalanche center noted as larger than any seen in the last 10 years. This also resulted in soaking rain below 1000' ASL, which is likely why the Portage snow course at 50' ASL is one of the few locations to report below normal snow on May 1. Regardless, the region boasts a considerably above normal snowpack, and melt out, when averaged amongst the telemetered stations in the region, appears to be about one week late. The high mountains sites, only measured May 1, are either similar to last year's snowpack or markedly more wet than last year.

Kenai Peninsula

Snowpack Data

		Snow Depth (in)		Water Content (in)			
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Anchor River Divide	1653	28	34		9.9	14.1	9.3
Bertha Creek	950	48	58	45	20.4	22.3	16.8
Bridge Creek	1300	38	30	26	12.9	11.5	9.2
Cooper Lake	1200	29	39		11.3	16.0	8.2
Demonstration Forest	780	26	4	6	10.0	1.5	2.0
Eagle Lake	1400	32	35	17	10.1	14.6	5.8
Exit Glacier	400	43	48	22	17.3	19.7	8.6
Exit Glacier SNOTEL	400	38	44		13.5	16.4	
Grandview	1100	71	82		29.9	37.3	33.4
Grouse Creek Divide	700	47	50		16.2	22.8	10.8
Jean Lake	620	0	0	0	0.0	0.0	0.0
Kenai Moose Pens	300	4	0		1.5	0.0	0.0
Kenai Summit	1390	33	38	25	12.8	16.2	9.2
Lark Valley	3350	99	67		46.5	31.0	
Lower Kachemak Creek	1915	50	49				
Mcneil Canyon	1320	22	24		9.5	9.6	4.4
Moose Pass	700	21	26	0	6.8	7.6	0.0
Mt. Alyeska	1540	75	73		30.4	31.0	30.4
Nellie Juan Tarn	3130	115			56.1		
Port Graham	300	25	15		11.1	2.6	0.0
Portage Valley	50	10	22	14	5.4	8.2	6.8
Primrose	2130	96	93		44.3	45.3	
Snug Harbor Road	500	0	0	0	0.0	0.0	0.0
Spencer Bench	2430	145	100		65	49.4	
Summit Creek	1400	26	25		10.6	10.2	6.4
Tincan	3400	133	100		70.8	45.2	
Turnagain Pass	1880	99	87		39.1	41.4	38.6
Upper Mill Creek	3750	94	100		45.1	49.4	
*Estimate							

Snowpack Map



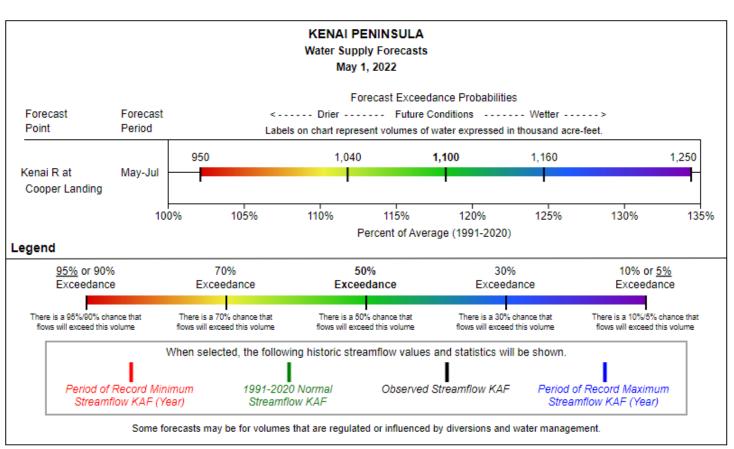
Kenai Peninsula

Precipitation

Inches Accumulated since October 1st

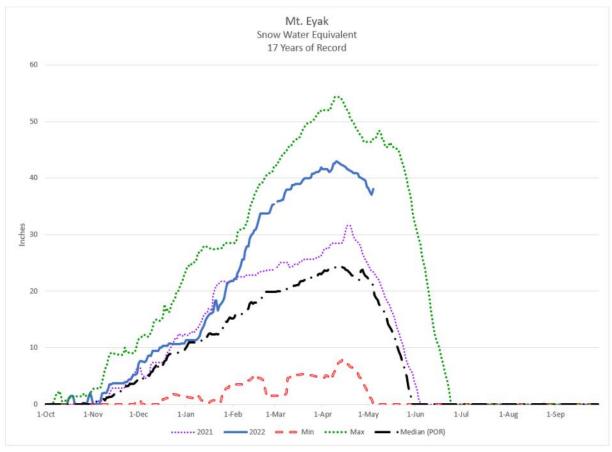
Site Name	Elev.	This Year	Last Year	1991-2020 Nor- mal	% of Normal
Anchor River Divide	1653	18.7	18.7	17.4	107%
Cooper Lake	1200	27.5	24.9	24.0	115%
Exit Glacier	400	47.6	52.5		
Grandview	1100	43.8	33.5	40.0	110%
Grouse Creek Divide	700	37.6	41.9	35.6	106%
Kenai Moose Pens	300	9.7	9.6	8.4	115%
Lower Kachemak Creek	1915	32.9	38.3		
Mcneil Canyon	1320	15.9	17.3	16.4	97%
Middle Fork Bradley	2300	30.0	35.4	30.4	99%
Mt. Alyeska	1540	52.6	38.6	42.0	125%
Summit Creek	1400	18.8	14.4	16.5	114%
Turnagain Pass	1880	40.8	39.6	38.1	107%

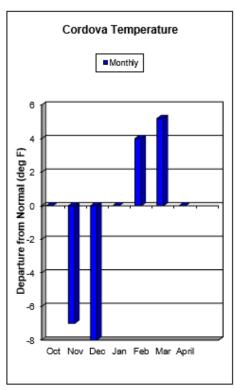
Forecast Point	Forecast Period	% of Average	Maximum(%)	Minimum(%)	50% Exceedance (KAF) 30yr Average (KAF)
Bradley Lake Inflow	Apr-Jul	102	120	85	195	191



Western Gulf - Prince William Sound







Snowpack

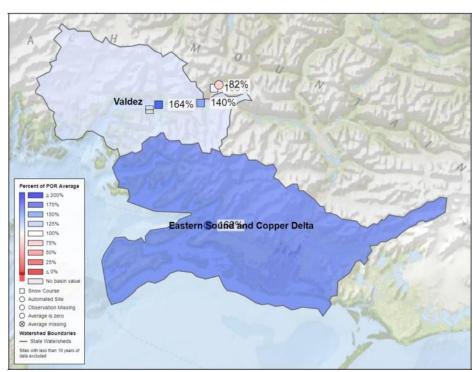
The May 1 snowpack in the Western Gulf region is above normal, with all stations reporting above normal SWE on May 1. April precipitation was about half of normal for the region and included rain for low elevations. Melt at the telemetered stations is a few days early compared to normal. Mt. Eyak peaked on April 9, which is about one week early.

Western Gulf — Prince William Sound

Snowpack Data

onon puon Duta			Snow Depth (in)	Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Esther Island	50	24	0				
Exit Glacier	400	43	48	22	17.3	19.7	8.6
Exit Glacier SNOTEL	400	38	44		13.5	16.4	
Grouse Creek Divide	700	47	50		16.2	22.8	10.8
Lowe River	600	39	29	22	15.1	10.7	8.6
Mt. Eyak	1405	96	65		37.6	24.0	19.9
Nicks Valley	4280	112	97				
Tsaina River	1650	43	35	36	16.0	14.1	12.5
Upper Tsaina River	1750	44	54		15.3	22.2	18.6
Valdez	50	44	25	20	18.2	8.7	8.3
Worthington Glacier	2100	64	63	62	24.8	25.5	23.5

Snowpack Map



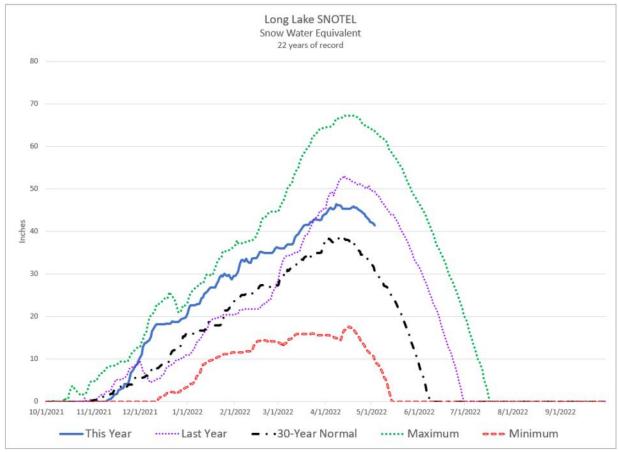
Precipitation

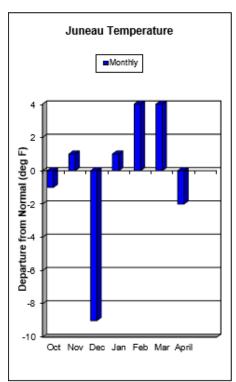
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Esther Island	50	97.1	87.6	92.5	105%
Exit Glacier	400	49.7	55.7		
Grouse Creek Divide	700	40.2	44.0	41.6	97%
Mt. Eyak	1405	74.2	67.2	79.2	94%
Nuchek	50	122.3	82.0		
Port San Juan	50	80.9			
Seal Island	20	40.8	38.1		
Strawberry Reef	30	49.3	39.9		
Tatitlek	50	48.2	42.2		
Upper Tsaina River	1750	19.3	24.4	26.7	72%

Southeast







Snowpack

The May 1 snowpack in Southeast Alaska is above normal where it persists. April precipitation was mixed across the region although generally below normal monthly precipitation. Juneau Airport and the Moore Creek Bridge SNOTEL are the only precipitation monitoring stations in the state to report near normal monthly precipitation, with rain being the predominant precipitation type at monitoring stations. The lower elevation snow courses, Fish Creek, West Creek and Petersburg Reservoir are snow free, which is typical for this date. The remainder of the monitoring stations are reporting above normal snowpack. The Long Lake SNOTEL peaked a few days earlier than its normal date to do so.

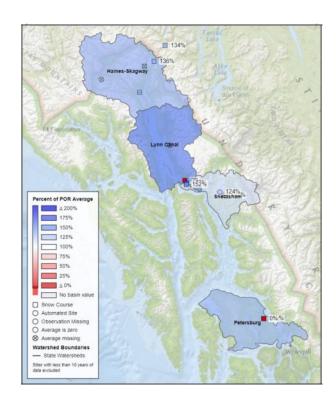
Southeast

Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Cropley Lake	1650	105	103	70	46.4	44.5	30.0
Eagle Crest	1200	69	77	36	28.1	25.9	13.3
Fish Creek	500	0	0	0	0.0	0.0	0.0
Heen Latinee	2065	78	59		31.3	24.2	
Lake Grace Pass †	1900	142	215			88.2	
Long Lake	850	90	115		42.1	49.8	32.2
Mint Creek Ridge †	1900	116	160			92.8	
Moore Creek Bridge	2250	63	70	50	27.0	31.6	20.0
Moore Creek Bridge SNOTEL	2250	66	82				
Mount Tyee Δ	2790	135	188		45.0	76.1	
Petersburg Reservoir	550	0	24	0	0.0	9.1	0.0
Petersburg Ridge, S.	1650	83	107	50	36.2	45.9	21.8
Speel River	280	58	76	46	25.1	32.3	22.4
Tyee Pass Δ	2820	184	240		72.7	88.8	
West Creek	475	0			0.0		
*Estimate							

[†] Measured 4/12/22

Snowpack Map



Precipitation Data

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Heen Latinee	2065	45.2	53.0		
Long Lake	850	118.6	119.4	103.7	114%
Moore Creek Bridge	2250	27.0	41.0	29.8	91%

Forecast Point	Forecast Period	% of Average	Maximum(%)	Minimum(%)	50% Exceedance (KAF	F) 30yr Average (KAF)
Taiya River near Skagway	Apr-Jul	120	140	100	540	450

[∆] Measured 4/14/22

For further information contact:

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